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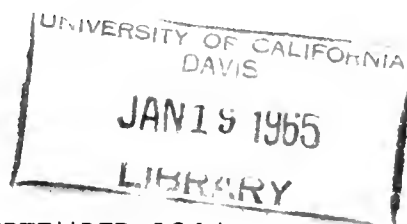
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BULLETIN No. 119-22

FEASIBILITY OF SERVING  
THE CITY OF YUBA CITY  
FROM THE STATE WATER PROJECT



SEPTEMBER 1964

HUGO FISHER  
*Administrator*  
The Resources Agency

EDMUND G. BROWN  
*Governor*  
State of California

WILLIAM E. WARNE  
*Director*  
Department of Water Resources



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### Credit Analysis of the City of Yuba City

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES

EDMUND G. BROWN, Governor of California  
HUGO FISHER, Administrator, The Resources Agency  
WILLIAM E. WARNE, Director, Department of Water Resources  
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DELTA BRANCH

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CALIFORNIA WATER COMMISSION

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- - - - - O - - - - -

WILLIAM M. CARAH  
Executive Secretary

ORVILLE L. ABBOTT  
Engineer

## ACKNOWLEDGMENTS

The cooperation of the City of Yuba City is gratefully acknowledged. Valuable assistance was contributed by the City Administrator and his staff.

Special mention is made of the following persons for their part in providing the information used in the water supply contract negotiations and in the preparation of this report:

Norman K. McPhail, City Administrator

Robert G. Mote, Public Works Director

Perry W. Hayden, Finance Director\*

John T. Kenward, City Attorney

\*Mr. Hayden assumed the duties of Finance Director on March 9, 1964, replacing Mr. Robert S. Hossli who resigned on September 16, 1963.

## CHAPTER I. INTRODUCTION

On December 30, 1963, the City of Yuba City executed a contract with the State of California for delivery of water from the State Water Project. The contract calls for service to begin in 1981 with 4,200 acre-feet increasing to a maximum annual entitlement of 8,300 acre-feet in 1990. This contract was the result of negotiations between the city and the Department of Water Resources based on data compiled and presented in this report.

### Purpose and Scope of the Report

The purpose of this report is to present the essential data used in evaluating the feasibility of providing Yuba City with a water supply from the State Water Project. The report includes: (1) a review of the economic history of the area in which the city is located, (2) the recent economic development and future economic potential of the city, (3) estimates of the city's future water needs, (4) an estimate of the costs that will be incurred by the city in meeting future water requirements, and (5) an evaluation of the city's capability to finance and operate the necessary works for treatment and distribution of a surface water supply, and the city's ability to purchase a portion of this water supply from the State Water Project.

### Description of the City

Yuba City lies in the northern portion of the great Central Valley of California about 40 miles north of Sacramento, near the confluence of the

Yuba and Feather Rivers. The city is the county seat and largest population center in Sutter County. The location of the city is shown on Plate 1, "Location Map."

The entire water supply is pumped from wells owned and operated by the city. The local ground water supply is adequate in quantity but the quality is poor. Because of this poor quality supply the city has decided that a gradual transfer from a ground water to a surface water source is desirable.

The terrain in the Yuba City area is relatively flat, generally sloping to the southwest, with a slough running from northeast to southwest across the city. The elevation varies from 46 feet near the slough in the southwest corner of the city to 60 feet at the north end of town.

The city is bordered on the east by the Feather River, which over the years has played a prominent role in the city's development. Marysville, which lies directly across the river, is the county seat of Yuba County. The Yuba City-Marysville region is commonly referred to as the "Hub" serving the surrounding agricultural areas as the major trade center. The city limits and surrounding area are shown on Plate 2, "Yuba City."

### History of the City

Yuba City had its origin during the gold rush of 1849. Being located near the confluence of the Feather and Yuba Rivers, it was a natural site to serve as a trading center for gold miners during the early years of the boom. However, after the boom the city settled down as a service and supply center for the adjacent farming areas.



Between 1849 and 1907, fire and floods were a constant threat to the city. The city grew rapidly for intermittent periods only to be set back by a major disaster. In 1907, the city was almost completely destroyed by a fire.

From 1908 to the present the population of the city has been rising steadily. Light manufacturing moved in to supplement the agriculturally oriented economy. As the town grew, the area of the city has increased by annexations of small adjacent parcels of land.

The city was hit by a disastrous flood on December 23, 1955, when the flow of the Yuba River exceeded any previous known historic flow. The peak discharge of 161,500 cubic feet per second far exceeds the previous recorded maximum of 120,000 cubic feet per second. Estimates of damage ran as high as \$65,000,000 for Yuba City, Marysville, and the surrounding agricultural areas.

#### Taxing Powers and Ability to Contract with the State

Yuba City is a general law city (Government Code Section 34102) and is governed by the laws applicable to such cities. It is expressly authorized to contract for a water supply for municipal purposes, and to acquire water by purchase. Government Code Sections 38742(a) and 38730.

A general law city has the power to levy an annual property tax. Subject to certain exceptions, such tax may not exceed \$1 on each \$100 of assessed valuation, unless a majority of the city electors voting at an election held for that purpose are in favor of a higher tax. Government Code Section 43068.

To incur an indebtedness or liability in any one year exceeding the income and revenue provided for such year, a city must have the assent of two-thirds of the qualified electors, and must have made provision for the discharge of such an indebtedness within a period of 40 years. California Constitution Article 11, Section 18. Where a contract provides for the furnishing of services in the future, such as water service to a municipal corporation, and payment is contingent on the furnisher's performance, no indebtedness is incurred until the furnishing of the service takes place. All payments by the city under a water service contract with the State would be contingent on future performance of contractual obligations by the State, and all future payments to be made under such contract would not constitute a single indebtedness incurred at the outset.

Metropolitan Water District v. Marquardt, 59 Cal. 2d 159, 379 Pac. 2d 28.

Municipal corporations are among state agencies expressly authorized to contract with the Department of Water Resources for the purchase or use of water under provisions of the Water Code governing the Central Valley Project pursuant to which the department will operate the State Water Project. Water Code Sections 11102, 11625 to 11664, and 12931.

#### Annexations -- Requirements and Policy

Territory may be annexed by a general law city, such as the City of Yuba City, pursuant to procedures set forth in Government Code Sections 35000 to 35471. Such procedures include provisions for notification of the county boundary commission of any proposed annexation, notice to inhabitants or owners of land, filing and hearing of protests, an election within inhabited territory proposed to be annexed and under certain conditions within the existing boundaries of the city, and final decision by the

legislative body of the city. The present policy of the city is to accept annexation of any size, from single lots on up, provided that costs for extension of service facilities are borne by the owners of land annexed.



## CHAPTER II.      HISTORICAL AND FUTURE DEVELOPMENT OF ECONOMY

After the decline of mining activity in the 1850's the Yuba City area developed as a trading community serving the agricultural needs of Sutter and Yuba Counties. Today the city is a major shipping point for the agricultural and manufactured products of the area. It is served by both the Southern Pacific and the Sacramento Northern Railroads. The Western Pacific Railroad serves Marysville, only a mile away. U. S. 40 Alternate and U. S. 99E running north and south and State Route 20 running east and west are its principal highways.

Although the economic activity has traditionally depended upon agriculture, diversified light industries have now located within the city. Since 1940 the manufacture of concrete pipe, agriculture implements and machinery, and lumber products has increased in importance.

It is expected that the economy of the city will continue to depend principally upon agriculture. Industrial growth should have an increasing effect on the economy as the city grows. Increased activity is expected in food processing and canning as well as in the service industries.

### Population

Yuba City has exhibited substantial growth during the past 40 years with the population in 1960 nearly 7 times that of 1920. The rate of growth during this period was over twice that for Sutter County as a whole. In 1920, the city with a population of 1,700 had about 17 percent of the county's population, while in 1960 its share had grown to almost 35 percent.

Valid population forecasts of any area must depend largely on known data. In a particular area, such as a city, the principal consideration is the relationship of the smaller area to the county areas, to the region, and to the State. The principal known factors affecting these relationships are the following: (1) trends of in-migration or out-migration; (2) trends of births and deaths; (3) trends of employment; (4) resources of water, climate, land, minerals, labor, and capital; and (5) markets for products.

Studies of this type have been performed by the Department of Water Resources, and reported on in the department's Bulletin No. 58, "Northeastern Counties Investigation" and in Bulletin No. 78, Appendix D, "Economic Demand for Water, 1960." There were no specific projections made for Yuba City itself in any of these studies, but projections were made of Sutter County's population in Bulletin No. 58.

In making the forecast of population growth in Yuba City, the underlying assumptions were that the population of the area would continue to increase at a substantially faster rate than other areas of the county and that in-migration would provide the bulk of population growth during the next three decades.

Table 1 lists the historical population and projections to 1990 for Yuba City, Sutter County, and California.

#### Limitations on Future Development

The only apparent limitation which might affect the growth of Yuba City is an inadequate supply of good quality water. The city may expand in all directions except eastward, where it is bordered by the Feather River. With additional drainage facilities the area to the south is expected to develop rapidly.

TABLE 1

HISTORICAL AND PROJECTED POPULATION  
 OF YUBA CITY, SUTTER COUNTY, AND CALIFORNIA  
 1920-1990  
 (thousands of persons)

	Historical					Projected		
	1920	1930	1940	1950	1960	1970	1980	1990
Yuba City	1.7	3.6	5.0	7.9	11.5	17.6	26.2	37.5
Sutter Co.	10.1	14.6	18.7	26.2	33.4	42.2	55.9	79.1
California	3,427	5,677	6,907	10,586	15,717	21,700	28,000	35,000





### CHAPTER III. DEMAND FOR PROJECT WATER

Presented in this chapter are discussions and evaluations of the various factors pertaining to local water requirements and supplies, and the potential demand for water from the State Water Project. This evaluation is predicated upon maximum utilization of local supplies.

#### Present and Projected Water Requirements

Urban water use in Yuba City has increased considerably during the past 40 years due to both greater population and a higher per capita use. Estimates of per capita use for Yuba City were based on department studies made for Bulletin No. 58, modified to reflect the results of subsequent studies made expressly for the area. The per capita use as used herein is an equivalent value which includes an allowance for industrial uses.

Per capita water use in urban areas is related to personal income. As personal income rises, standards of living and water use rise proportionately. This increase is caused by larger lawns, added bathrooms, a larger number of water-using appliances, and more swimming pools. Personal income in the area undoubtedly will follow national, state, and northern California trends, resulting in significant increases during the next 25 years with attendant higher rates of per capita water use.

The per capita use is expected to increase from an estimated 290 gallons per day (0.325 acre-feet per year) in 1960 to 330 gallons per day (0.370 acre-feet per year) in 1990.

The estimates of future water requirements for the city were determined by applying the appropriate projections of per capita water use to the projected population for Yuba City (from Table 1) for each decade. The results of these calculations are shown in Table 2.

TABLE 2  
ESTIMATED UNIT WATER USE AND  
TOTAL WATER REQUIREMENTS  
(1960-1990)

Year	Population	Unit Water Use (acre-feet per capita per year)	Total Water Requirement (acre-feet)
1960	11,500	0.325	3,740
1970	17,600	0.347	6,100
1980	26,200	0.358	9,400
1990	37,500	0.370	13,900

#### Present Water Supplies

Yuba City presently derives its entire water supply from ground water. The replenishment of this ground water occurs as a result of the percolation of rainfall, streamflow, and the unconsumed portion of applied irrigation water. In recent years ground water replenishment has been exceeded by ground water withdrawals, resulting in a continuous lowering of the water table. In spite of this overdraft, it appears that the foreseeable future needs of the city could be met by ground water pumping if the water obtained was of satisfactory quality.

The city pumps from thirteen wells located throughout the community. Two elevated steel tanks, with an aggregate capacity of 250,000 gallons, serve as balancing storage units. The locations of these facilities are shown on Plate 2.

The quality of the water presently obtained by Yuba City from most of its wells is exceptionally poor. Some of the well waters contain detectable amounts of hydrogen sulfide. Excessive amounts of iron and manganese also exist in most of the well waters. The presence of these undesirable elements has caused Yuba City residents to complain frequently about the taste and odor of the municipal water supply. Many of the service connections in the city are presently equipped with costly commercial water softeners to improve the characteristics of the well water.

A complete mineral analysis of a water sample from each of the city's thirteen wells was made in November 1961. Twelve of thirteen samples tested did not meet U. S. Public Health Service Drinking Water Standards due to excessive concentrations of iron and/or manganese. These drinking water standards and the mineral analysis of the well waters are shown in Tables 3 and 4, respectively.

The city has made several studies to determine the feasibility of continuing to use ground water as the prime supply. An investigation was also made of the possibility of using a Raney Well Collector adjacent to the Feather River. In both cases water quality proved to be the limiting factor. Consideration was given the treatment of ground water supplies; however, the cost to remove manganese was found to be excessive.

TABLE 3

UNITED STATES PUBLIC HEALTH SERVICE  
DRINKING WATER STANDARDS

	Mineral Constituent			
	Total Solids	Iron	Manganese	Chlorides
Recommended Upper Limit of Concentration (parts per million)	500	0.3	0.05	250

TABLE 4

MINERAL ANALYSIS OF GROUND WATERS  
IN YUBA CITY 1/

Well No. <u>2/</u>	Concentrations - in parts per million			
	Total Solids	Iron	Manganese	Chlorides
1	270	0.06	0.03	31
2	250	0.14	0.13	21
4	307	1.20	0.20	25
5	339	0.26	0.22	36
7	226	0.20	0.10	25
8	238	0.06	0.17	26
10	264	0.12	0.10	18
11	362	0.54	0.33	48
12	320	1.20	0.30	28
13	262	0.05	0.10	18
14	98	0.15	0.60	2
15	346	1.50	0.05	33
16	239	0.40	0.05	14

1/ California Dept. of Public Health, Report of Sanitary Engineering  
Survey of Public Water System, April 1962, Samples collected Nov. 29, 1961

2/ All wells except No. 1 fail to meet U. S. Public Health Service  
Drinking Water Standards in respect to iron and/or manganese.

It has been the experience of the city that water quality is related to the quantity pumped, and thus some improvement in the quality of the well water can be obtained by decreasing the rate of pumpage. This improved quality well water could be used in conjunction with treated surface water to satisfy the needs of the city.

The city has a large investment in existing ground water pumping facilities. Relative economics would favor maximum utilization of these facilities, as long as water quality could be kept within limits. By abandoning the wells as they reach their economic life span, a gradual substitution of surface water can be effected with a minimum of capital outlay.

#### Alternative Water Supplies

Nonproject sources must be considered in determining the potential demand for project water. Several alternatives are available to Yuba City to augment its existing supply to meet future needs. The alternatives include (1) Feather River diversion under the city's appropriative water right and (2) supplies from other public or private water supply agencies.

#### Water Right

The City of Yuba City filed Application No. 18025 with the State Water Rights Board on March 5, 1958, for direct diversion of 15.6 cfs from the Feather River for municipal purposes. This application was protested by the Department of Water Resources, the U. S. Bureau of Reclamation, Garden Highway Mutual Water Company and Reclamation District No. 800.

The Department of Water Resources has conducted studies to determine the yield to water rights along the Feather River from the natural flow and their effect on the yield of the State Water Project. Results of these computations reveal there would be insufficient unappropriated water in the

Feather River to meet the city's diversion entitlement under Permit No. 14045 during certain portions of dry years. The study showed that during the 34-year period between 1924 to 1957, the city would not have been able to divert during: (1) June in 11 of the 34 years, (2) September in all years, and (3) October in 12 of the 34 years.

The Department of Water Resources withdrew its protest following the execution of an agreement on December 18, 1961, specifying that the city would not divert stored water released from Oroville Reservoir except under terms of a valid water supply contract with the department. The remaining protests were satisfied by a diversion season restriction.

Permit No. 14045 was issued by the State Water Rights Board for direct diversion of 15.6 cfs, with the diversion season limited to 10 months (January through June and September through December). The exclusion of July and August was made in recognition of the lack of unappropriated water in the Sacramento-San Joaquin Delta to which the Feather River is tributary.

Assuming that historical conditions will be approximated in future years, the diversions under the permit will be inadequate to meet the city's full requirements. Such diversions can be used to meet a substantial portion of the city's needs, however, if they can be supplemented by other dependable water supplies.

#### Other Sources

The city can contract with the Yuba County Water District for water delivered from the Oroville-Wyandotte Irrigation District's South Fork Project. The Yuba County Water District has a contract for delivery of up to 4,500 acre-feet per annum of water at Miners Ranch Terminal Reservoir. The water could be conveyed via the Kelly Ridge Power Plant and the Feather River to Yuba City's point of diversion. The district could deliver the water to the city at a maximum release schedule as follows:

<u>Month</u>	<u>Maximum Release</u>
April	181 Acre-feet
May	492
June	893
July	922
August	922
September	714
October	376
Total	<u>4,500</u> acre-feet per year

Use of Yuba County Water District water in combination with use of the city's permit to divert from the Feather River and the use of ground water, could satisfy Yuba City's water demands until 1980.

Another source of supplemental supply could be the Pacific Gas and Electric Company which operates several storage reservoirs on the North Fork Feather River. Pacific Gas and Electric Company officials have indicated that sale of its water would be on an "if and when we can" basis, consistent with its public utility obligations. Thus, while this source would be relatively inexpensive, the city would not be guaranteed a firm supply.

Water service from the federal Central Valley Project, is a remote possibility, as Yuba City does not lie within the federal project service area. To obtain the water from the Feather River, a three party water exchange agreement would have to be reached between the city, the State and the United States Bureau of Reclamation, as the water would be supplied from the Oroville facilities built by the State.

#### Demand for Project Water

In summary, it appears the optimum course of action for Yuba City to follow in order to meet its future water requirements would be to plan on using an integrated supply from local ground water, the Yuba County Water District, diversions under Water Right Permit No. 14045 and water service from the State Water Project.

Estimates of the demand for project water were based on water deliveries solely for municipal and industrial use. Annual water demand buildup was based on increases in population and per capita use as studies indicated. Considering the maximum possible use of all available local water supplies; (1) ground water, (2) diversion of Feather River water under permit and (3) diversion from the river of water released by Yuba County Water District, it was determined that project water would be needed to meet city demands after 1980. The resulting recommended use of the water sources available to the city to meet anticipated requirements is shown in Table 5.

TABLE 5  
ESTIMATED USE OF WATER FROM  
VARIOUS SOURCES  
(acre-feet per year)

Year	: Estimated : Requirement : of City	Water Source			
		: City	: City	: Yuba County	: State
		: Wells	: Water Right	: Water District	: Water Project
1968 <sup>1/</sup>	5,600	2,800	1,400	1,400	--
1970	6,100	3,290	1,410	1,400	--
1975	7,500	2,310	2,530	2,660	--
1980	9,400	2,000	2,900	4,500	--
1981	9,800	--	1,100	4,500	4,200
1985	11,550	--	1,100	4,500	5,950
1990	13,900	--	1,100	4,500	8,300

<sup>1/</sup> Estimated year of initial surface water use.



Delivery of project water as shown above will begin in 1981 with 4,200 acre-feet. Deliveries will increase up to 1990 when the maximum annual entitlement of 8,300 acre-feet will be utilized.

#### Limitation of Project Water Use

Under Permit No. 14045 issued by the State Water Rights Board, Yuba City is entitled to appropriate water from the Feather River by direct diversion except during the months of July and August of each year. To ensure that state project water would be used to help meet the city's needs throughout the year and not merely to firm up its supply during July and August, Article 45(i) of the Yuba City contract provides as follows:

45(i). "Project water supplied to the Agency pursuant to this contract shall be supplied on a delivery schedule which will ensure that the ratio of project water delivered each year to the Agency's total supply of water for such year equals or exceeds the average of the ratios that project water bore to the Agency's total water supply during July and August of the three preceding years: Provided, That the provisions of this subdivision shall not apply to the Agency's delivery schedule for the initial three years of water delivery under this contract."



## CHAPTER IV. COST OF WATER SERVICE

One of the most important considerations in analyzing the feasibility of serving Yuba City from the State Water Project is the additional cost the city must incur by changing to a surface water supply. New or additional costs include the cost of purchasing water, capital repayment for local facilities, and water treatment costs.

### Local Facilities

The introduction of a surface water supply will necessitate certain new facilities in addition to improvements to the existing distribution system. New facilities initially needed by the city will include an intake structure in the river, a low lift pumping station to lift the water over the levee, a two-million-gallon-per-day water treatment plant, and pumping facilities to put the water into the distribution system. Necessary improvements to the existing distribution system will consist mainly of an arterial loop pipeline encompassing the main business district to convey water from the treatment plant to the areas of use, without excessive head losses.

Several alternatives are available to the city in staging and financing the necessary facilities to provide for treatment and distribution of a surface water supply. In order to estimate the costs one plan was selected as being most representative and a staging and cost estimate was prepared. It should be noted that this plan is one of many and is merely an attempt to evaluate the cost of water to the city for the purposes of this report. The cost estimate was based on the assumption that the schedule of water use by source presented in Table 5, Chapter III would be followed.

The engineering firm of Roy M. Trotter and Associates, under a contract with the city, has estimated that these facilities will require an initial capital outlay of approximately \$720,000. Required expansions of the treatment plant will require additional capital outlays of approximately \$288,000 in 1970, \$669,000 in 1976, \$644,000 in 1980, and \$621,000 in 1988. Improved storage facilities required to satisfy peaking demands will require approximate outlays of \$150,000 in 1969 and \$300,000 in 1972. These estimates were based on 1963 construction costs. It was assumed that the capital outlay for local facilities would be met through the issuance of thirty-year bonds by the city. Interest was assumed to be four percent.

The treatment plant operation and maintenance costs are the costs projected by Roy M. Trotter and Associates. The operation and maintenance costs for the distribution system were projected using historic costs and prorating them to compensate for changing over to a surface water supply system. Cost of water from the Yuba County Water District was assumed to be the same as water obtained from the State Water Project.

#### State Water Project

The State Water Project is being constructed by the State with funds derived principally from the sale of general obligation bonds, authorized under the California Water Resources Development Bond Act<sup>1/</sup> and from the California Water Fund.

<sup>1/</sup> Chapter 6 (commencing with Section 12930) of Part 6 of Division 6 of the Water Code.

The contract executed on November 4, 1960, between the State and The Metropolitan Water District of Southern California is the department's prototype water supply contract. The department's publication "Standard Provisions for Water Supply Contract," approved August 3, 1962, is based on this prototype contract.

The standard provisions set forth the terms which will be generally applicable to all contracts, and establish the mutual obligations of the State and the water supply contractors. The State's essential obligation is to make available for delivery to the contracting agency, at its delivery structures, designated amounts of project water each year, commencing with the year of initial water delivery and continuing through the life of the contract. The essential obligation of the contracting agency is to make all payments required under the contract. These include payment for the conservation works and for the transportation facilities necessary to deliver water to the contracting agency.

Every contractor for project water will pay an annual amount per acre-foot of water, designated as the Delta Water Charge. This charge, together with revenues derived from power generated in connection with the operation of project conservation facilities, will return to the State all reimbursable costs of the conservation facilities within the project repayment period.

Project transportation facilities are not required to serve the city from the project, therefore, only the Delta Water Charge is applicable.

The Delta Water Charge is presently set at \$3.50 per acre-foot through 1969 and is estimated to be \$5.46 per acre-foot from 1970-77, and \$7.34 per acre-foot thereafter until supplemental project conservation facilities, as specified in the standard provisions, are constructed.

The total annual payment by the city for service from the State Water Project, determined by applying the Delta Water Charge to the city's annual entitlements, varies from \$30,800 in 1981 to \$60,900 in 1990.

#### Total Water Cost

The estimated total annual cost of future water service to Yuba City is presented in Table 6.

TABLE 6  
ESTIMATED TOTAL ANNUAL WATER COST  
1968-1990

Year	: Water Deliveries :		Water Cost		:Local Facilities Cost :		
	: Yuba Co. :	: State :	: Yuba Co. 1/ :	: Delta :	: Capital :	: Operation :	: Total
	: Water :	: Water :	: Water :	: Water :	: Repayment:	: &	: Annual
	: District :	: Project:	: District :	: Charge:		:Maintenance:	: Cost
	: ac-ft :	: ac-ft :	: \$ :	: \$ :	: \$ :	:	: \$
1968	1,400	--	4,900	--	50,300	164,200	219,400
1970	1,400	--	7,700	--	67,000	183,200	257,900
1980	4,500	--	33,000	--	160,300	300,900	494,000
1990	4,500	8,300	33,000	60,900	196,200	559,000	849,100

1/ Cost of water from Yuba County Water District was assumed to be equal to the Delta Water Charge.

## CHAPTER V. FINANCIAL CAPABILITY

The financial capability of Yuba City to contract for service from the State Water Project has been analyzed on the basis that the city will have an adequate supply of good quality water. As explained in Chapter III of this report, the quality of the present supply is not conducive to future growth and might severely limit economic development if not improved. Since the city has executed a contract with the State for a water supply and is also investigating other surface water sources, it is reasonable to assume the city will expand and prosper.

Financial capability is a showing that the public credit of the contracting agency would be sufficient to reasonably support and repay any costs incurred for project water service. These costs include both the payment to the State for project water and payment of the capitalized costs of local facilities as described in Chapter IV.

### Present and Projected Assessed Valuation

The assessed valuation of property within Yuba City for the 1963-64 fiscal year was about 28.6 million dollars. This valuation represents an estimated market value of over 88.4 million dollars. The assessed valuation of the city has doubled during the past 10 years as a result of increased population and economic activity. Table 7 shows the assessed valuation of property within the city from 1954 to the present.

Assessed valuation of property in the city will undoubtedly continue to increase in the future along with population and economic development. It was necessary to make projections of assessed valuations

TABLE 7  
HISTORICAL ASSESSED VALUATIONS  
1954-1963

Year	Valuations		1/ Total
	:	:	
	Per Capita		
1953-54	\$1,496		\$13,934,343
1954-55	2,085		20,223,292
1955-56	1,650		17,360,283
1956-57	1,363		14,201,392
1957-58	2,181		23,507,451
1958-59	1,728		19,242,914
1959-60	1,768		20,353,379
1960-61	1,920		22,801,242
1961-62	2,168		26,545,562
1962-63	2,188		27,899,940
1963-64	2,168		28,615,610

1/ The variation of assessed valuation prior to F.Y. 1958-59 is a result of changes in the assessment ratio with respect to the market value. The only exception occurred during 1956-57 when damage from the December 1955 flood was responsible for a decrease in valuation over the previous year.

to analyze the ability to pay for new water service. These projections are conservative as they were based on the assumption that the assessed valuation per capita would remain at its present level. Projected assessed valuations are shown in Table 8.



TABLE 8  
PRESENT AND PROJECTED ASSESSED VALUATIONS  
1963-1990

Year	Population	Assessed Value Per Capita	Assessed Valuation
1963	13,200	\$2,168	\$28,615,610
1965	14,500	2,100	30,400,000
1970	17,600	2,100	37,000,000
1980	26,200	2,100	55,000,000
1990	37,500	2,100	78,800,000

Present and Projected Bonded Indebtedness

As of June 30, 1963, Yuba City, as a political entity, had no general obligation bonded indebtedness. However, within the area encompassed by the city, special districts carried a bonded debt of \$1,982,880. School bonds represent the greatest portion of this bonded debt, comprising about 83 percent of the total. The remaining 17 percent consisted of the debts of six special assessment districts within the city.

Table 9 indicates the historical bonded indebtedness for which property owners within the city have been responsible.

TABLE 9  
HISTORICAL BONDED INDEBTEDNESS  
1959-63

Year	Boned Indebtedness				Debt as a Percent of Assessed Valuation
	High School District	Elem. School District	Other	Total	
1959	514,300	211,990	168,557	894,850	4.6%
1960	744,310	470,240	139,500	1,084,220	5.2
1961	747,000	411,840	120,640	1,279,480	5.6
1962	474,480	362,940	178,944	1,286,190	4.8
1963	514,300	934,180	334,900	1,982,880	7.2

1/ As of June 30.

Although it is difficult to predict the extent to which the city will incur bonded indebtedness in the future, it was assumed that the relationship between bonded debt and assessed valuation would remain about the same as it is at the present time.

The recent rise in the debt ratio is due almost exclusively to an extensive school building program in the area. It is expected that the rate of increase in bonded debt will be no greater than the rate of increase of the city's assessed valuation, assuming a continuous retirement of existing debt. Table 10 shows the estimated future indebtedness.

TABLE 10  
PRESENT AND PROJECTED BONDED INDEBTEDNESS  
1963-1990

Year	Bonded <u>1/</u> Indebtedness	Debt as a percent of Assessed Valuation
1963	\$1,982,900	7.2%
1965	2,189,000	7.2
1970	2,664,000	7.2
1980	3,960,000	7.2
1990	5,674,000	7.2

1/ Excluding debt for surface water diversion and treatment facilities.

The general obligation bonded indebtedness of Yuba City incurred for public improvements may not exceed in the aggregate 15 percent of the assessed value of all real and personal property within its boundaries. Government Code Section 43605.

#### Financing Future Obligations

The determination of financial capability requires an analysis of several interrelated factors, including the amount of money required to pay an agency's allocated share of costs, the probable repayment schedule necessary, the present and future assessed valuation within the city, its current and future debt for other public works, the tax rates prevalent in the area, and the additional tax rates or service charges that will be necessary in undertaking project water service.

An investigation was made of the present financial condition of Yuba City and the data gathered in this investigation are presented in detail in Appendix A. The data in Appendix A do not attempt to measure the impact of proposed costs of water service on the city but may be used to obtain a picture of historical and current financial conditions of the city.

#### Comparison with Assessed Valuations

In 1963 the percentage of bonded indebtedness to assessed valuation in Yuba City was 7.2 percent. This compares with a ratio of about 17 percent for the City of Oroville<sup>1/</sup> and about 13 percent for the City of Sacramento. The bonded debt of Yuba City is expected to increase in the future more or less commensurately with increases in assessed valuation. This debt will be augmented, however, by the additional debt incurred by the city for diversion, water treatment facilities and improvements to the distribution system to handle surface water supplies.

Using the estimated capital costs and the repayment schedule for local facilities given in Chapter IV and the projected assessed valuations, Table 8, the total debt outstanding in any one year on the local facilities was computed as a percentage of projected assessed valuation in Yuba City. These percentages are shown in Table 11.

The maximum projected debt ratio of 4.3 percent occurs in about 1980 and would then decline throughout the repayment period.

<sup>1/</sup> Oroville is a chartered city and therefore is not limited to the 15 percent bonded indebtedness to assessed valuation ratio that applies to general law cities. Government Code Section 43605.

TABLE 11  
PROJECTED BONDED INDEBTEDNESS  
FOR LOCAL FACILITIES

Year	: Assessed : Valuation	: Outstanding Debt : on Local : Facilities	: Debt as a Percent : of Assessed : Valuation
1967	33,000,000	\$ 720,000	2.2%
1970	37,000,000	1,112,471	3.0
1980	55,000,000	2,355,776	4.3
1990	78,800,000	2,161,558	2.7

#### Levels of Ad Valorem Taxation

Property tax rates in Yuba City have remained relatively constant in recent years. The present tax rate of \$1.25 per \$100 assessed valuation was set in 1959. (City, County, and school district taxes totaled \$5.60 per \$100 assessed valuation for 1961-62.) This compares favorably with the city tax rate of Sacramento of \$1.64 and of Oroville of \$1.90.

#### Revenue from Water Sales

The local diversion, treatment and distribution system improvements would most likely be financed by the sale of bonds by the city to be repaid from operating revenues. This approach is only one of many alternative methods of financing the system and should not be construed as the only one acceptable. In order to estimate the necessary charges for repayment a financial analysis was made assuming that future bonded indebtedness would be retired in equal annual installments over a thirty-year period at an interest rate of four percent.

Future water rates were projected on the basis of an equitable charge which would be conducive to the continued economic development of the city. The present rate averages about \$3 per connection per month. Future rates were projected to meet the estimated annual costs discussed in Chapter IV and to accrue a contingency reserve fund. The average rate was increased to \$3.25 per connection per month for 1965 to 1967, to \$3.75 for 1968 to 1971, to \$4.00 for 1972 to 1975, to \$4.25 for 1976 to 1979, to \$4.75 for 1980 to 1987, and to \$5.25 for 1988 to 2017. Additional revenue was provided by a \$100 installation charge for each new connection between 1965 and 1990.

A summary of the estimated revenues, costs and the balance of the reserve fund remaining at the end of the year is presented in Table 12.

TABLE 12  
ESTIMATED INCOME, COSTS, AND RESERVES  
FROM WATER SYSTEM OPERATION

Year	Number of Service Connections	Annual Revenue	Annual Costs	Accumulated Reserve Fund 1/
1965	4,900	\$189,500	\$ 92,700	\$ 97,000
1970	5,900	284,600	258,000	416,000
1975	7,300	379,100	343,100	537,000
1980	8,700	526,200	494,000	762,000
1985	10,600	641,900	664,000	739,000
1990	12,500	825,200	849,100	637,000
1995	12,500	787,000	848,900	330,000
2000	12,500	787,000	787,500	232,000

1/ It should be noted that the amount shown in the reserve fund is money that can be used for additional water facilities which may be required after 1990. Consideration can also be given to a decrease in the water rates or to a repayment of the bonds at an earlier date than scheduled.

On the basis of the foregoing analysis it was concluded that the City of Yuba City has the financial capability to fulfill the obligations of a water service contract with the State. Although this analysis was based on the use of bonds to be repaid by revenue derived from the sale of water, this approach is only one of many alternative methods of financing the system and should not be construed as the only one acceptable.





## CHAPTER VI. CONCLUSIONS

Analysis of the data gathered and presented in this report has led to the following conclusions:

1. Yuba City has the potential for substantial economic development, providing sufficient water supplies of good quality are available in the future.

2. The local ground water supplies available are not of sufficient quality to satisfy future requirements.

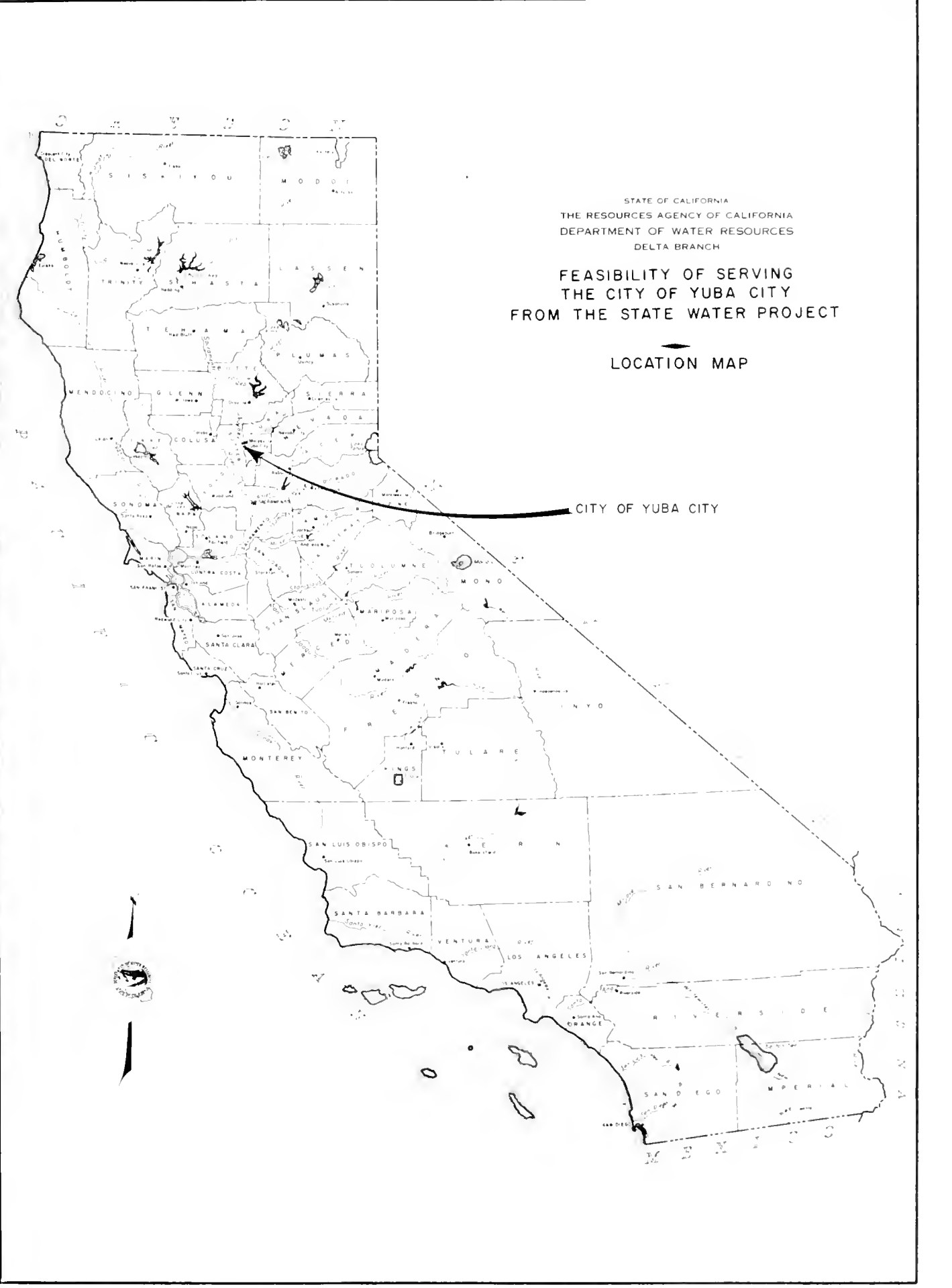
3. Yuba City will have an economic demand for water of about 13,900 acre-feet per year by the year 1990.

4. The financial position of Yuba City is such that the execution and performance of a water supply contract with the State for a maximum entitlement of 3,500 acre-feet per year from the State Water Project would not cause an unreasonable financial burden on the city.

5. Financing the construction of necessary local distribution facilities and treatment plant would not increase the city's total ratio of debt obligations to assessed valuation beyond acceptable limits.

6. Yuba City has the necessity, the legal ability, and the financial capability required to enter into a contract with the State of California for the service of water from the State Water Project.





FEASIBILITY OF SERVING  
THE CITY OF YUBA CITY  
FROM THE STATE WATER PROJECT

LOCATION MAP







APPENDIX A  
CREDIT ANALYSIS OF THE  
CITY OF YUBA CITY





APPENDIX A  
CREDIT ANALYSIS OF YUBA CITY

A. Statement of Debt of Yuba City

1. Net Direct Debt (full faith and credit).
  - a. Bonds. None
  - b. Other Debt. As of June 30, 1963, a debt of \$6,760 existed, arising from a flood relief loan made by the State.
  - c. Total Debt. As of June 30, 1963, \$6,760.
2. Special Obligations (not full faith and credit).
  - a. Sewer and Water Revenue Bonds. \$244,000
3. Limitation on Debt.
  - a. Bonds. General obligation bonds to secure an indebtedness for public improvements may be issued in amounts not exceeding 15 percent of the assessed value of all real and personal property of the city. Bonds may not bear an interest rate of more than six percent per annum, and maturity may not exceed 40 years.
  - b. Applicable Statutes. Government Code Sections 35000 et seq. State Constitution Article XI, Section 18.
4. Amount of Bonds Authorized but Unissued. None
5. Utilities Operated by the City (other than water service).
  - a. Sanitary Sewer System.

1/  
D. Debt of Overlapping, Coterminous and Underlying Political Units.

Name and Character of Unit Bearing Bonded Indebtedness	:	Net Debt	:	Net Debt Assignable to the City's Area	:	Percent	:	Amount
1951A Assessment District - Street Improvements		\$13,190		100.0%		\$		13,190
1952A Assessment District - Street Improvements		55,940		100.0				55,940
1955A Assessment District - Street Improvements		4,800		100.0				4,800
1959A Assessment District - Swimming Pool		44,840		100.0				44,840
1960A Assessment District - Street Improvements		13,730		100.0				13,730
1963A Assessment District - Sewer and Water Facilities for the Stabler Subdivision		202,400		100.0				202,400
Elementary School District		1,184,000		78.9				934,180
High School District		2,069,000		34.5				<u>713,800</u>
TOTAL								\$1,982,880

1/ As of June 30, 1963.

C. Summary of Full Faith and Credit Debt of the City and Other Political Entities.

Type of Debt	:	Outstanding Debt 1/								
	:	1959	:	1960	:	1961	:	1962	:	1963
Net Bonded Debt		\$894,850		\$1,084,220		\$1,279,480		\$1,286,190		\$1,982,880
Other Debt		<u>17,740</u>		<u>14,100</u>		<u>11,590</u>		<u>9,140</u>		<u>6,760</u>
TOTAL DEBT		<u>\$912,590</u>		<u>\$1,098,320</u>		<u>\$1,291,070</u>		<u>\$1,295,330</u>		<u>\$1,989,640</u>

1/ AS OF JUNE 30.

D. Default Record. There has been no default in the payment of principle or interest on any debt, either by the city or by any overlapping, coterminous, or underlying taxing district.

E. Assessed Valuations and Estimated Market Value of Property.

1. Assessed Valuations.

Item	1,000's of Dollars				
	: 1959-60	: 1960-61	: 1961-62	: 1962-63	: 1963-64
Real Estate	\$ 4,030	\$ 4,514	\$ 6,527	\$ 7,574	\$ 7,614
Improvements	12,974	14,545	16,405	19,052	19,941
Personal Property	1,633	1,518	1,694	1,959	1,960
Unsecured Per.Prop.	1,275	1,763	1,949	1,996	2,000
Assessed by State	<u>1,935</u>	<u>2,088</u>	<u>2,350</u>	<u>2,401</u>	<u>2,401</u>
Subtotal	21,847	24,428	28,925	32,982	33,916
Less Exemptions	<u>1,494</u>	<u>1,626</u>	<u>2,380</u>	<u>5,082</u>	<u>5,300</u>
TOTAL ASSESSED VALUATION	<u>\$20,353</u>	<u>\$22,802</u>	<u>\$26,545</u>	<u>\$27,900</u>	<u>\$28,616</u>
ESTIMATED MARKET VALUE	<u>\$57,520</u>	<u>\$64,202</u>	<u>\$75,838</u>	<u>\$86,056</u>	<u>\$88,392</u>

2. Assessment Ratio (percent of market value).

The assessment ratio for real and personal property in the city has been 40 percent for the last five years.

3. Major Tax Exempt Property within the City.

The hospital and the Sutter County Buildings are the only major tax exempt property within the city.

4. Concentrations of Valuable Property just Outside the City.

There are no concentrations of valuable property just outside the city.

5. Largest Taxpayers in the City.

A cursory examination of property records has revealed that the ten largest taxpayers within the city probably do not contribute a significant portion of the total taxes collected.

F. City Property Tax Rates on Property in Yuba City.

1. Tax Rate Components.

Property tax rates in Yuba City have remained stable in recent years. The present city level of \$1.25 per \$100 assessed valuation was set in 1959. (City, county, and school district taxes totaled \$5.60 per \$100 assessed valuation for 1961-62.) Prior to fiscal year 1958-59 it was the policy of the city to vary the assessment ratio in relation to the revenue that was needed, rather than adjust the tax rates.

2. Assessment Roll.

Yuba City maintains its own assessment roll.

3. Legal Limits on Tax Rates (in dollars per \$100 Assessed Valuation).

Unless a majority of the city electors approve, the annual city property tax may not exceed \$1 per \$100 assessed valuation, exclusive of such tax as may be necessary to pay the costs of sewerage facilities, park and recreation facilities, and certain other municipal purposes as defined by the Public Resources Code and the Education Code of the State. There has been a surtax over the \$1 limit for nongeneral fund expenditures since 1952.

4. Taxes by Classification of Property.

With some exceptions, tax rates apply to all classes of property, whether real or personal, secured or unsecured.

G. Record of City Tax Collections on Property in Yuba City.

1. Tax Collections.

Year <u>1/</u>	:	Amount Levied	:	Cash Collections		:	Uncollected at End	
	:		:	in Year of Levy		:	of Fiscal Year	
	:		:	Amount	Percent	:	Amount	Percent
1959		\$230,789		\$222,330	96.45		\$8,455	3.60
1960		258,886		248,793	96.0		10,083	4.0
1961		285,225		278,402	97.0		6,823	3.0
1962		331,789		312,059	94.2		12,730	5.0
1963		344,206		335,338	97.4		8,868	2.6
AVERAGE		-		-	<u>96.2</u>		-	<u>3.8</u>

1/ As of June 30.

2. When Taxes are Due.

- Due Date. One-half of the total tax levy is due on November first and February first.
- When Delinquent. December 10th and April 10th following due date.
- Penalties. Penalties attach as of the delinquent date, to the extent of six percent of each installment. An interest rate of one percent per month is charged after July 1.

3. Tax Sales.

Tax sales of delinquent property are held when necessary.

4. Estimated Tax Delinquency.

Each year, the Finance Director estimates a tax payment delinquency which is used for budget purposes. This estimate is generally two and one-half percent of the total levy.

5. Collection of City Taxes.

Yuba City collects its own taxes.

II. Receipts and Disbursements of Yuba City.<sup>1/</sup>

Income and Expense	: 1958-59	: 1959-60	: 1960-61	: 1961-62
1. <u>Cash, beginning of fiscal year.</u>	\$449,720	\$365,450	\$431,930	\$450,450
2. <u>Receipts.</u>				
a. Taxes				
1. Property taxes	235,500	263,930	282,460	320,700
2. Other taxes	108,170	126,210	144,020	153,230
3. Total	<u>343,570</u>	<u>390,140</u>	<u>426,480</u>	<u>473,930</u>
b. Charges for water service	137,750	144,210	155,200	164,270
c. Other income	<u>312,690</u>	<u>354,390</u>	<u>430,560</u>	<u>452,050</u>
d. Total receipts	3794,110	3383,740	41,012,240	41,090,250
3. <u>Total Cash Plus Receipts.</u>	<u>\$1,243,830</u>	<u>\$1,254,190</u>	<u>\$1,444,170</u>	<u>\$1,540,700</u>
4. <u>Disbursements.</u>				
a. Salaries, Wages, Operating Expenses	599,170	608,100	668,210	656,970
b. Capital Outlay	218,910	154,560	258,730	313,360
c. Loan Repayments	<u>60,300</u>	<u>59,600</u>	<u>66,780</u>	<u>50,150</u>
5. <u>Total Disbursements.</u>	<u>\$878,380</u>	<u>\$822,260</u>	<u>\$993,720</u>	<u>\$1,020,480</u>
6. <u>Cash, End of Fiscal Year.</u>	<u>\$365,450</u>	<u>\$431,930</u>	<u>\$450,450</u>	<u>290,220</u>

1/ Including financial receipts and disbursements of special assessment district.

I. Sinking Fund Operations.

There were no sinking funds being operated during the 1961-62 fiscal year.

J. Future Debt Service Requirements.

As of June 30, 1963, \$244,000 in revenue bonds were outstanding. This represents the balance due on the indebtedness incurred by the city of \$550,000 in sewer bonds issued in 1948 and \$100,000 in water bonds issued in 1951. Annual payments on the amount outstanding will be made until these debts have been fully repaid in 1969. The projected capital repayments over the next seven years are shown in the following table.

PROJECTED REPAYMENT SCHEDULE  
FOR SEWER AND WATER BONDS

Cause of Debt	Period	Total Payment
1948 Sewer Bond, Series A	1963-64	\$11,375.00
	1964-65	11,100.00
	1965-66	10,825.00
	1966-67	10,450.00
	1967-68	10,275.00 RETIRED
1948 Sewer Bond, Series B	1963-64	19,060.00
	1964-65	18,625.00
	1965-66	20,272.00
	1966-67	27,585.00
	1967-68	26,897.50
	1968-69	45,210.00 RETIRED
1948 Sewer Bond, Series C	1963-64	5,420.00
	1964-65	5,320.00
	1965-66	5,220.00
	1966-67	6,120.00 RETIRED
1951 Ledford Water Bond	1963-64	8,540.00
	1964-65	8,360.00
	1965-66	8,100.00 RETIRED

## K. Management and Service.

### 1. Fiscal Policies.

The fiscal policies of the city appear to be consistent with sound business practices.

### 2. General Character and Efficiency of the Management.

The management has endeavored to provide dependable and efficient water service through a system operated by competent personnel.

### 3. Services Performed.

Legislative, administrative, elective and defense services are an overlapping responsibility of all political jurisdictions, city, county, state, and federal. Those additional services provided by the city are the generally accepted functions of city government. At present there are some water and sewer connections to individual properties outside the city limits. The city policy, in recent years, has been to refuse to extend services except by annexation.

## L. Economic Background.

### 1. Land Area.

The city presently (1963) encompasses about 2,050 acres, all within Sutter County.

### 2. Population.

<u>Year</u>	<u>: Population</u>
1920	1,700
1930	3,600
1940	6,270
1950	7,860
1960	11,510



### 3. Employment.

The economy is basically related to agriculture and food processing. Beale Air Force Base and other defense operations add considerably to the local economy. Many civilian and military personnel working on construction projects in the area live in Yuba City.

### 4. Principle Economic Activities.

- a. Food Processing.
- b. Light Industry.
- c. Government Service.
- d. Service Industries.

### 5. Trade.

Wholesale trade activities within the area are centered largely around the packing and shipping of agricultural products. Rapid mercantile growth has been based primarily on supplying goods and services to community residents and rural families.

### 6. Transportation.

U. S. Highway 99E and 40A and State Highways 20 and 24 provide the city with good road transportation in all directions. The Western Pacific, Southern Pacific, and the Sacramento Northern railroads all serve Yuba City. The city is located 50 miles from the deep water port facilities in east Yolo County. Pacific Air Lines provide local air transportation and the new Sacramento Airport will provide major airlines and air transport services. The area is also served by several trucking companies and by Greyhound Bus Lines.

7. Natural Resources.

Important natural resources of the north Sacramento Valley region include oil, natural gas, sand, gravel, and industrial clays. Fish and wildlife are also important resources of the region.

8. Financial Data for Yuba City.

1. General Data.

a. Population.

1950	7,860
1960	11,510

b. Assessed Valuation.

1. Amount	\$28,615,610
2. Basis of assessment	40%
3. Estimated market value	\$71,540,000

c. Bonded Debt.

(as of June 30, 1963)	\$ 1,982,900
-----------------------	--------------

d. City Tax Levies.

1962-63	\$ 344,206
---------	------------

2. Per Capita Data (1962-63).

a. <u>Assessed valuation.</u>	\$ 2,198
b. <u>Estimated market value.</u>	\$ 6,758
c. <u>Bonded debt.</u>	\$ 150.90
d. <u>City Tax levies.</u>	\$ 26.10

3. Ratios.

a. Tax supported bonded debt as percentage of:

1. Assessed valuation	7.2%
2. Estimated market value	2.2%



12



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